TABLE 3.—*Summary of availability of water by river basins in the Mississippi embayment*

[See bottom of table for descriptive terms relating to low flow of stream, ground-water yield, dissolved solids, hardness of water, iron, and for U.S. Public Health Service recommended limits for drinking-water standards for dissolved solids, iron, fluoride, and nitrate. Parts per million, ppm; cubic feet per second per square mile, cfs per sq mi; million gallons per day, mgd; gallons per minute, gpm; hours, hr]

Basin / Source	Headwater diversion channel, St. Johns Bayou, and Little River basins (pl. 1)	St. Francis River basin, except Little River basin (pl. 1)	White River basin (pl. 1)	Arkansas River basin (pl. 2)	Upper Ouachita River basin to, and including, Saline River basin (pl. 2)	Bayou Bartholomew, Boeuf and Tensas River basins (pl. 2)
	Low flow well sustained in Headwater diversion channel and St. Johns Bayou; poorly to very well sustained, but mostly very well sustained, in Little River basin. 11 samples at 6 sites indicate water hard to very hard, iron 0.00–0.08 ppm (all but 3 samples 0.00 ppm), fluoride 0.0–0.5 ppm, nitrate 0.0–1.4 ppm (all but 1 sample less than 1.0 ppm), silica 8.5–26 ppm.	Low flow very well to well sustained above, and poorly sustained below, mouth of Little River. 3 samples at 2 sites indicate water hard to very hard, iron 0.00 ppm, fluoride 0.1–0.3 ppm, nitrate 0.4–1.0 ppm, silica 6.4–16 ppm.	Low flow of tributaries very well sustained from Black River upstream and poorly sustained downstream from Black River. 10 samples at 6 sites indicate water varies from soft in lower to very hard in upper part of basin, iron 0.00–0.36 ppm (only 1 sample exceeds 0.04 ppm), fluoride 0.0–0.4 ppm, nitrate 0.2–2.1 ppm, silica 1.8–30 ppm (only 1 sample exceeds 18 ppm).	Low flow of tributaries poorly sustained. 1 sample insufficient for indication of quality.	Low flow of tributaries well sustained above Little Missouri River and poorly sustained in and below Little Missouri River. Except for 1 site where oilfield wastes are present, 10 samples at 5 sites on tributaries indicate water soft, and low in dissolved solids. Water in Little Missouri River basin soft to moderately hard. 10 samples show iron 0.00–0.22 ppm, fluoride 0.0–0.3 ppm, nitrate 0.1–0.8 ppm, silica 0.0–14 ppm.	Low flow well sustained south of and poorly sustained north of about lat 32°45′. 6 samples at 3 sites show water soft to moderately hard, iron 0.00–0.20 ppm, fluoride 0.2–0.4 ppm, nitrate 0.2–2.0 ppm, silica 0.9–11 ppm.
Paleozoic rocks	Small to moderate yields. Water is very hard and moderate to high in dissolved solids.	Small to moderate yields. Water is very hard and moderate to high in dissolved solids.	Not used as source of water supply in basin. Yields probably small. Water probably is very hard and moderate to high in dissolved solids.			
Lower Cretaceous rocks						
Tuscaloosa Group or Formation and Woodbine Formation						
Eutaw Formation and Tokio Formation					Tokio Formation—Small to moderate yields. Water in western part of basin is soft and contains iron. Water is saline in eastern and southern parts of basin.	
Coffee Sand and Ozan Formation					Ozan Formation—Small yields. Water is moderately hard to very hard, high in dissolved solids, and contains some iron. Water is saline in most of basin; aquifer used as source for water supplies only where water of better quality is not available.	
Ripley Formation or McNairy Sand, and Nacatoch Sand	McNairy Sand—Small to moderate yields. Water soft to moderately hard and moderate in dissolved solids. Nacatoch Sand—Not used as source of water supply in basin. Yields probably small to moderate. Water probably is soft, high in dissolved solids, and saline in extreme southern part of basin.	McNairy Sand—Small to moderate yields. Water is soft to moderately hard, moderate to high in dissolved solids, and contains some iron. Nacatoch Sand—Small to moderate yields. Limited quality information indicates that the water is soft, and high in dissolved solids, becoming saline in southern part of basin.	McNairy Sand—Not used as source of water supply in basin. Nacatoch Sand—Not used as source of water supply in basin. Water probably saline, except in northern third of basin.		Nacatoch Sand—Small to moderate yields. Water is soft to very hard, moderate to high in dissolved solids, and contains some iron. Water is saline in eastern and southern parts of basin.	
Wilcox aquifers	Lower Wilcox aquifer—Small to large yields. Water is soft, moderate in dissolved solids, and contains iron.	Lower Wilcox aquifer—Small to large yields. Water is soft, moderate in dissolved solids, and contains some iron.	Lower Wilcox aquifer—Small yields. Limited quality information indicates that the water is saline, except in the extreme western part of basin.	Minor Wilcox aquifers—Small to moderate yields. Limited quality information indicates that the water is soft, low in dissolved solids, and contains some iron.	Minor Wilcox aquifers—Small to moderate yields. Water is soft, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0. Water is saline in southeastern two-thirds of basin.	
Carrizo Sand and Meridian-upper Wilcox aquifer		Carrizo Sand—Small to moderate yields. Water is soft to moderately hard, high in dissolved solids to saline water, and contains iron.			Carrizo Sand—Small to moderate yields. Water is soft, moderate in dissolved solids, and contains iron. Water is saline in southern half of basin.	
Cane River Formation; Reklaw Formation, Queen City Sand, and Weches Greensand; and Winona-Tallahatta aquifer			Cane River Formation—Small yields; formation contains aquifers only in the southwestern part of basin. Water is soft, high in dissolved solids, and contains some iron.		Cane River Formation—Small yields. Water is soft, moderate to high in dissolved solids, and contains iron. Water is saline in southern half of basin.	
Sparta Sand		Small to moderate yields. Water is moderately hard to very hard, high in dissolved solids to saline water, and contains iron.	Small to large yields. Water is soft to very hard, moderate to high in dissolved solids, saline water in at least 1 area, contains iron, and in places has a pH of less than 7.0.	Small to large yields. Water is soft, low to moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.	Small to moderate yields. Water is soft, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.	Small to moderate yields. Water is soft, moderate in dissolved solids, and contains some iron. Water is saline in southern two-thirds of basin.
Memphis aquifer	Small to large yields. Limited quality information indicates that the water is moderately hard to hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.	Small to large yields. Water is moderately hard to very hard, high in dissolved solids, contains iron, and in places has a pH of less than 7.0.	Small to moderate yields. Water is hard to very hard, low to moderate in dissolved solids, contains some iron, and has a pH of less than 7.0.			
Cockfield Formation or equivalent		Small yields. Limited quality information indicates that the water is moderately hard and moderate in dissolved solids.	Small to moderate yields. Water is moderately hard to hard, moderate to high in dissolved solids, and contains iron.	Small to moderate yields. Water is soft, moderate in dissolved solids, and contains some iron.	Small to moderate yields. Water is soft, moderate to high in dissolved solids, contains some iron, and in places has a pH of less than 7.0.	Small to moderate yields. Water is soft, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0. Water is saline in southern part of basin.
Forest Hill Sand						
Catahoula Sandstone						
Quaternary deposits	Small to large yields. Water is hard to very hard, moderate to high in dissolved solids, and contains iron.	Small to large yields. Water is very hard, moderate in dissolved solids, and contains iron.	Small to large yields. Water is very hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.	Small to large yields. Water is very hard, moderate to high in dissolved solids, contains iron, and in places has a pH of less than 7.0.	Small to large yields. Water is soft to moderately hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.	Small to large yields. Water is very hard, moderate to high in dissolved solids, contains iron, and in places has a pH of less than 7.0.

Basin / Source	Lower Ouachita River basin, below Saline River basin, except Bayou Bartholomew, Boeuf, Tensas, and Dugdemona River, and Castor Creek basins (pl. 2)	Red River basin, except Saline Bayou basin (pl. 3)	Sabine River basin (pl. 3)	Dugdemona River, Castor Creek, and Saline Bayou basins (pl. 3)	Big Black River and Bayou Pierre basins (pl. 4)	Pearl River basin (pl. 4)
	Low flow poorly sustained, except for Bayou de Loutre which is well sustained. Except for 2 sites where oilfield wastes are present, 12 samples at 6 sites show water soft, low to moderate in dissolved solids (25–148 ppm), iron 0.01–1.2 ppm (higher concentrates are north and west of Ruston, La.), fluoride 0.0–0.4 ppm, nitrate 0.0–1.7 ppm, silica 1.4–19 ppm.	Low flow of tributaries poorly sustained, except for some streams near south edge of embayment in Louisiana where the low flow is well sustained. Except for 3 sites where oilfield wastes are present, 25 samples at 13 sites show most water soft and low in dissolved solids, and some water moderately hard to very hard and high in dissolved solids, iron 0.00–1.2 ppm (only 3 samples in excess of 0.2 ppm), fluoride 0.0–2.0 ppm (1 sample in excess of 0.5 ppm), nitrate 0.0–4.0 ppm, silica 2.4–34 ppm (1 sample in excess of 29 ppm).	Low flow poorly sustained. No quality information.	Low flow of Saline Bayou and western part of Dugdemona River basins well to very well sustained; eastern part of Dugdemona River and in Castor Creek basins, poorly sustained. 2 samples insufficient for indication of quality.	Low flow well to poorly sustained. 4 samples at 2 sites show water soft, low to moderate in dissolved solids (57–142 ppm), iron 0.00–1.4 ppm, fluoride 0.0–0.4 ppm, nitrate 0.5–6.0 ppm, silica 3.5–10 ppm.	Low flow well to poorly sustained. 4 samples at 2 sites show water soft, low in dissolved solids, iron 0.00–0.32 ppm, fluoride 0.0–0.1 ppm, nitrate 0.5–0.9 ppm, silica 2.8–6.5 ppm.
Paleozoic rocks						
Lower Cretaceous rocks		Trinity Group—Small to moderate yields. Water is saline except in extreme northern part of basin, where water is soft, moderate to high in dissolved solids, contains iron, and in places has a pH of less than 7.0.			A potential source of fresh water in extreme eastern part of basin. No quality information; water probably is similar in quality to that in Tuscaloosa Group.	
Tuscaloosa Group or Formation and Woodbine Formation		Woodbine Formation—Small yields. Water is saline except in extreme northern part of basin, where water is soft, moderate in dissolved solids, and contains some iron.			Tuscaloosa Group—Small to moderate yields in extreme eastern part of basin. Water is soft, high in dissolved solids, and contains iron.	
Eutaw Formation and Tokio Formation		Tokio Formation—Small yields. Water is saline in most of basin.			Eutaw Formation—Small yields in extreme eastern part of basin. No quality information; water probably is soft, high to saline in dissolved solids, and contains iron.	
Coffee Sand and Ozan Formation						
Ripley Formation or McNairy Sand, and Nacatoch Sand		Nacatoch Sand—Small to moderate yields. Water is soft, moderate to high in dissolved solids, and contains some iron. Water is saline in southern part of basin.				
Wilcox aquifers		Minor Wilcox aquifers—Small to moderate yields. Water is soft, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0.	Minor Wilcox aquifers—Small yields. No quality information.	Minor Wilcox aquifers—Small to moderate yields. Water is saline except in southwestern part of basin where the water is soft, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0.	Lower Wilcox aquifer—Small to moderate yields in eastern half of basin. Water is soft, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0. Minor Wilcox aquifers—Small to moderate yields in eastern half of basin. No quality information; water is probably similar in quality to that in lower Wilcox aquifer.	Lower Wilcox aquifer—Moderate to large yields in eastern part of basin; not used elsewhere. Water is soft, low in dissolved solids, contains iron, and has a pH of less than 7.0. Dissolved solids increase with depth, and water is saline in western one-third of basin. Minor Wilcox aquifers—Small to moderate yields in central and eastern parts of basin. Water is soft, low in dissolved solids, contains some iron, and has a pH of less than 7.0.
Carrizo Sand and Meridian-upper Wilcox aquifer		Carrizo Sand—Small to moderate yields. Water is soft, moderate in dissolved solids, and contains some iron.	Carrizo Sand—Small yields. No quality information.		Meridian-upper Wilcox aquifer—Small to large yields. Not present in extreme eastern part of basin. Water is soft to moderately hard, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0. Water is saline in extreme western part of basin.	Meridian-upper Wilcox aquifer—Small to large yields. Water is soft, low in dissolved solids, contains some iron, and in places has a pH of less than 7.0.
Cane River Formation; Reklaw Formation, Queen City Sand, and Weches Greensand; and Winona-Tallahatta aquifer		Reklaw Formation, Queen City Sand, and Weches Greensand, and Cane River Formation—Small yields. Water is soft to moderately hard, moderate in dissolved solids, contains iron, and has a pH of less than 7.0.	Reklaw Formation, Queen City Sand, and Weches Greensand—Small yields. No quality information.		Winona-Tallahatta aquifer—Small yields. Water is soft to hard and moderate in dissolved solids. Present only in central part of basin.	Winona-Tallahatta aquifer—Small yields in central part of basin. No quality information; water probably is moderate in dissolved solids, but suitable for most uses without treatment.
Sparta Sand	Small to large yields. Water is soft, moderate to high in dissolved solids, contains some iron, and is colored locally.	Small to moderate yields. Water is soft to moderately hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.		Small to moderate yields. Water is soft, moderate in dissolved solids, contains iron, and has a pH of less than 7.0.	Moderate to large yields in central and western parts of basin. Water is soft, moderate in dissolved solids, and contains iron. Water is saline in extreme western part of basin and is highly colored locally.	Moderate to large yields in central and western parts of basin. Dissolved-solids content is low in the central part and increases to the west and south. Water is soft, contains some iron, is colored locally, and in places has a pH of less than 7.0.
Memphis aquifer						
Cockfield Formation or equivalent	Small to moderate yields. Water is soft to moderately hard, moderate to high in dissolved solids, and contains some iron.				Small to moderate yields in central and western parts of basin. Water is soft to moderately hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0. Water is saline in extreme western part of basin.	Small to moderate yields in central and western parts of basin. Water is soft, moderate in dissolved solids, contains iron, and in places is colored.
Forest Hill Sand					Small yields in western one-third of basin. Water is soft to moderately hard, moderate in dissolved solids, and contains some iron. Water is saline in extreme western part of basin.	Small yields in southwestern part of basin. Water is soft, moderate in dissolved solids, contains iron, and in places is colored.
Catahoula Sandstone					Small to moderate yields in extreme southern part of basin. No quality information; water probably is moderately hard, moderate in dissolved solids, contains iron, and in places may have a pH of less than 7.0.	Small to moderate yields in extreme southern part of basin. No quality information; water probably is moderately hard, moderate in dissolved solids, contains iron, and in places may have a pH of less than 7.0.
Quaternary deposits	Small to large yields. Water is moderately hard to very hard, moderate to high in dissolved solids, and has a pH of less than 7.0.	Small to large yields. Water is very hard, moderate to high in dissolved solids, contains iron, and in places has a pH of less than 7.0.	Small yields. No quality information.		Large yields in extreme western part of basin. No quality information; water is probably hard, moderate in dissolved solids, and contains iron.	

Basin / Source	Pascagoula River basin (pl. 4)	Yazoo River basin (pl. 5)	Tombigbee River basin (pl. 6)	Ohio and Cache River basins (pl. 7)	Tennessee and Cumberland River basins (pl. 7)	Shawnee, Mayfield, and Obion Creeks, and Bayou du Chien basins (pl. 7)
	Low flow very well to well sustained. No quality information.	Low flow in western part of basin (Mississippi River alluvial plain) very well sustained. Indices for Quiver River and most eastern tributaries to Yazoo, Tallahatchie, and Coldwater Rivers are lower, but low flow well sustained. In eastern part of basin low flow of North Tippah Creek and Yalobusha River upstream from Enid Reservoir poorly sustained; that of all other streams well sustained to very well sustained. Indices for Chewalla and Little Springs Creeks are highest in embayment. 24 samples at 12 sites show water soft and low in dissolved solids, except in western part of basin where water is moderately hard to hard and moderate in dissolved solids, iron 0.00–0.62 ppm, fluoride 0.0–0.3 ppm, nitrate 0.3–5.3 ppm, silica 2.8–14 ppm.	Low flow in western tributaries north of Noxubee River basin (about 11 percent of the gaged sites) poorly sustained. Low flow in remainder of basin well to very well sustained. 25 samples at 13 sites show water soft in 84 percent of samples, moderately hard in others, dissolved solids less than 100 ppm in 80 percent of samples, from 0.00–0.50 ppm (exceeds 0.27 ppm at 2 sites), fluoride 0.0–0.2 ppm, nitrate 0.0–2.6 ppm, silica 1.8–11 ppm.	Low flow in Ohio River tributaries and Cache River poorly sustained. 10 samples at 6 sites show water soft, low in dissolved solids (except Cache River where water is hard, and moderate in dissolved solids), iron 0.00–0.43 ppm (exceeds 0.18 ppm in 1 sample), fluoride 0.0–0.3 ppm, nitrate 0.2–3.5 ppm, silica 4.4–8.8 ppm.	Low flow in Tennessee River tributaries in Alabama, Mississippi, and Tennessee very well sustained, except for isolated scattered streams in most of which low flow is well sustained. In Kentucky, low flow is poorly sustained. 10 samples at 5 sites show water soft (except in Turkey Creek where water is moderately hard), low to moderate in dissolved solids, iron 0.00–0.61 ppm (exceeds 0.15 ppm in 2 samples), fluoride 0.0–0.2 ppm, nitrate 0.1–1.1 ppm, silica 1.8–9.3 ppm.	Low flow poorly sustained in upper parts of Mayfield and Obion Creeks and well sustained in lower parts; very well sustained in Bayou du Chien. 5 samples at 3 sites show water soft and low in dissolved solids, iron 0.00–0.24 ppm, fluoride 0.2–0.4 ppm, nitrate 0.3–1.8 ppm, silica 2.9–7.3 ppm.
Paleozoic rocks			Small to large yields. Chemical quality of water is variable due to different sources. Water use restricted to eastern periphery of basin where Paleozoic rocks occur at shallow depths and overlying aquifers are thin.	Small to moderate yields. Water is hard to very hard and moderate in dissolved solids.	Small to moderate yields. Water is hard, moderate in dissolved solids, and contains some iron.	
Lower Cretaceous rocks			A potential source of fresh water in west-central part of basin.			
Tuscaloosa Group or Formation and Woodbine Formation		Tuscaloosa Group—Small to moderate yields. Water is saline except in extreme eastern part of basin where water is soft, high in dissolved solids, and contains iron.	Tuscaloosa Group—Small to large yields, except in extreme northern part of basin where yields are small. Water is soft, low in dissolved solids, and has a pH of less than 7.0. Coker Formation (Tuscaloosa Group)—Small to large yields in southern and central parts of basin. Water is soft, low in dissolved solids, contains iron and has a pH of less than 7.0. Gordo Formation (Tuscaloosa Group)—Small to large yields. Water is soft, low in dissolved solids except in extreme western part of basin, contains iron, and in places has a pH of less than 7.0.		Tuscaloosa Group or Formation—Small to moderate yields. Water is soft, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.	
Eutaw Formation and Tokio Formation		Eutaw Formation—Small to moderate yields. Water is saline, except in extreme eastern part of basin where water is soft, high in dissolved solids, and contains some iron.	Eutaw Formation—Small to moderate yields. Water is soft and low in dissolved solids near outcrop; sodium, chloride, and bicarbonate contents increase rapidly with depth. Water is hard and contains iron in extreme northern part of basin. Water in upper part of Eutaw higher in dissolved solids than water in the lower part (McShan Formation). The pH in places is less than 7.0.		Eutaw Formation—Small to moderate yields. Water is soft, low in dissolved solids, contains some iron, and has a pH of less than 7.0.	
Coffee Sand and Ozan Formation		Coffee Sand—Small to moderate yields. Water is saline except in northeastern part of basin where water is soft, moderate in dissolved solids, and contains some iron.	Coffee Sand—Small to moderate yields in extreme northwestern part of basin. Sand not present elsewhere. Water is hard, moderate in dissolved solids, and may contain some iron.		Coffee Sand—Small to moderate yields. Water is soft, low to moderate in dissolved solids, contains iron, and has a pH of less than 7.0.	
Ripley Formation or McNairy Sand, and Nacatoch Sand		Ripley Formation—Small yields in northeastern part of basin. Water is soft, moderate in dissolved solids, and contains some iron. McNairy Sand Member of Ripley Formation—Small to moderate yields in extreme northeastern part of basin. Water is soft to hard, moderate in dissolved solids, and contains iron.	Ripley Formation—Small yields in small area in northwestern part of basin. Water is hard, moderate in dissolved solids, and contains iron.	McNairy Sand—Small to moderate yields. Water is moderately hard to hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.	McNairy Sand and McNairy Sand Member of Ripley Formation—Small to moderate yields. Water is soft, low to moderate in dissolved solids, contains iron, and has a pH of less than 7.0.	McNairy Sand—Small to moderate yields. No quality information; water probably is moderately hard and moderate in dissolved solids.
Wilcox aquifers	Lower Wilcox aquifer—Moderate to large yields. Water is soft to moderately hard, low to moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0. Mineralization increases westward and water is saline in extreme western part of basin. Minor Wilcox aquifers—Small to moderate yields. Water is moderately hard, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0.	Lower Wilcox aquifer—Small to large yields. Water is soft, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0. Minor Wilcox aquifers—Small to moderate yields. No quality information; water probably is similar in quality to that in lower Wilcox aquifer.	Lower Wilcox aquifer—Moderate to large yields in southwestern part of basin. Water is soft, low in dissolved solids, contains iron, and has a pH of less than 7.0.	Lower Wilcox aquifer—Small yields. Water is soft to moderately hard, low in dissolved solids, contains iron, and has a pH of less than 7.0.	Lower Wilcox aquifer—Small yields. Limited quality information indicates that water is soft, contains iron, and has a pH of less than 7.0.	Lower Wilcox aquifer—Small yields. No quality information; water probably is soft, moderate in dissolved solids, contains iron, and in places may have a pH of less than 7.0.
Carrizo Sand and Meridian-upper Wilcox aquifer	Meridian-upper Wilcox aquifer—Small to large yields. Saline water in extreme southwestern part of basin. Elsewhere, water is soft, moderate in dissolved solids, and in places has a pH of less than 7.0.	Meridian-upper Wilcox aquifer—Small to large yields. Water is soft, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0. Water is saline in southwestern part of basin.				
Cane River Formation; Reklaw Formation, Queen City Sand, and Weches Greensand; and Winona-Tallahatta aquifer	Winona-Tallahatta aquifer—Small yields in central and southeastern parts of basin. No quality information.	Winona-Tallahatta aquifer—Small to moderate yields. Water is soft, moderate in dissolved solids, and contains some iron.				
Sparta Sand	Small to moderate yields in central, western, and southeastern parts of basin. No quality information; water probably is soft, low in dissolved solids, and in places may be colored and contain iron.	Small to large yields. Water is soft, moderate in dissolved solids, contains some iron, and in places has a pH of less than 7.0.				
Memphis aquifer				Small to moderate yields. Water is soft, moderate in dissolved solids, contains iron, and has a pH of less than 7.0.	Small to moderate yields. Water is soft, low to moderate in dissolved solids, contains some iron, and has a pH of less than 7.0.	Small to large yields. Water is soft, low in dissolved solids, contains some iron, and has a pH of less than 7.0.
Cockfield Formation or equivalent	Small to moderate yields in central, southeastern, and western parts of basin. No quality information; water probably is soft and moderate in dissolved solids.	Small to large yields. Water is soft, moderate in dissolved solids, and contains some iron.				Cockfield equivalent—Small yields. No quality information.
Forest Hill Sand	Small yields in southwestern part of basin. No quality information.					
Catahoula Sandstone	Small to moderate yields. No quality information; water probably is soft to moderately hard, moderate in dissolved solids, contains iron, and may have a pH of less than 7.0.					
Quaternary deposits		Small to large yields. Water is very hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.		Small to large yields. Water is hard, moderate to high in dissolved solids, contains iron, and has a pH of less than 7.0.	Small to moderate yields. Water is moderately hard to hard, moderate in dissolved solids, contains some iron, and has a pH of less than 7.0.	Small to large yields. Water is very hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.

Basin / Source	Obion River basin, except Forked Deer River basin (pl. 7)	Forked Deer River basin (pl. 7)	Hatchie River and Cold Creek basins (pl. 7)	Loosahatchie and Wolf River, and Nonconnah Creek basins (pl. 7)	Basin / Source
	Low flow very well sustained, except for streams in northwestern part where low flow is well to poorly sustained. 12 samples at 6 sites show water soft, low in dissolved solids (except Richland Creek where water is very hard, and moderate in dissolved solids), iron 0.00–0.44 ppm (exceeds 0.13 ppm in 2 samples), fluoride 0.0–0.3 ppm, nitrate 0.4–1.8 ppm, silica 4.5–9.1 ppm.	Low flow very well sustained, except for some tributaries to South Fork where low flow is well to poorly sustained. 11 samples at 5 sites show water soft, low in dissolved solids, iron 0.00–0.10 ppm, fluoride 0.0–0.2 ppm, nitrate 0.1–1.4 ppm, silica 2.4–11 ppm.	Low flow very well sustained, except for some tributaries in Mississippi and in the northwestern part where the low flow is well to poorly sustained. 10 samples at 5 sites show water soft, low in dissolved solids, iron 0.00–0.33 ppm, fluoride 0.0–0.2 ppm, nitrate 0.2–1.1 ppm, silica 1.8–8.6 ppm.	Low flow very well sustained, except for some small streams, principally Nonconnah Creek and tributaries to the Loosahatchie, for which low flow is well to poorly sustained. 6 samples at 3 sites show water soft, low in dissolved solids, iron 0.00–0.15 ppm, fluoride 0.0–0.1 ppm, nitrate 0.1–0.8 ppm, silica 3.6–11 ppm.	Streams
Paleozoic rocks			Moderate to large yields. Water is hard and moderate in dissolved solids.		Paleozoic rocks
Lower Cretaceous rocks					Lower Cretaceous rocks
Tuscaloosa Group or Formation and Woodbine Formation					Tuscaloosa Group or Formation and Woodbine Formation
Eutaw Formation and Tokio Formation			Eutaw Formation—Small yields. No quality information.		Eutaw Formation and Tokio Formation
Coffee Sand and Ozan Formation	Coffee Sand—Small yields. No quality information. Coffee Sand present only in southeastern part of basin.	Coffee Sand—Small to moderate yields. No quality information; water probably is saline in western part of basin and moderate in dissolved solids in eastern part. Coffee Sand not present in northwestern part of basin.	Coffee Sand—Small to moderate yields. Water is hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.	Coffee Sand—Not used as source of water supply in basin. Water probably is saline in western half of basin and high in dissolved solids in eastern half.	Coffee Sand and Ozan Formation
Ripley Formation or McNairy Sand, and Nacatoch Sand	McNairy Sand Member of Ripley Formation—Small to moderate yields. Water is soft, low to moderate in dissolved solids, contains iron, and has a pH of less than 7.0 in eastern part of basin.	McNairy Sand Member of Ripley Formation—Small to moderate yields. Water is soft, low in dissolved solids, contains iron, and has a pH of less than 7.0.	McNairy Sand Member of Ripley Formation—Small to moderate yield. Water is hard, moderate in dissolved solids, contains iron, and in places has a pH of less than 7.0.	McNairy Sand Member of Ripley Formation—Not used as source of water supply in basin. Water probably is high is dissolved solids in western half of basin and moderate in dissolved solids in eastern half; may be saline near western edge of basin.	Ripley Formation or McNairy Sand, and Nacatoch Sand
Wilcox aquifers	Lower Wilcox aquifer—Small to moderate yields. No quality information; water probably is soft, low in dissolved solids, and may have a pH of less than 7.0.	Lower Wilcox aquifer—Small to large yields. Water is soft, low in dissolved solids, and has a pH of less than 7.0.	Lower Wilcox aquifer—Small to large yields. Water is soft, low in dissolved solids, contains some iron, and has a pH of less than 7.0.	Lower Wilcox aquifer—Small yields in eastern part of basin and large yields in western part. Water is soft, moderate in dissolved solids, and and contains iron.	Wilcox aquifers
Carrizo Sand and Meridian-upper Wilcox aquifer					Carrizo Sand and Meridian-upper Wilcox aquifer
Cane River Formation; Reklaw Formation, Queen City Sand, and Weches Greensand; and Winona-Tallahatta aquifer					Cane River Formation; Reklaw Formation, Queen City Sand, and Weches Greensand; and Winona-Tallahatta aquifer
Sparta Sand					Sparta Sand
Memphis aquifer	Small to large yields. Water is soft, low in dissolved solids, contains some iron, and has a pH of less than 7.0.	Small to large yields. Water is soft, low in dissolved solids, and has a pH of less than 7.0.	Small to large yields. Water is soft, moderate in dissolved solids, contains some iron, and has a pH of less than 7.0.	Small yields in eastern part of basin and large yields in western part. Water is soft, low in dissolved solids, contains iron, and has a pH of less than 7.0.	Memphis aquifer
Cockfield Formation or equivalent	Cockfield equivalent—Small yields. No quality information.	Cockfield equivalent—Small yields. No quality information.	Cockfield equivalent—Small yields. No quality information.	Cockfield equivalent—Small yields. No quality information.	Cockfield Formation or equivalent
Forest Hill Sand					Forest Hill Sand
Catahoula Sandstone					Catahoula Sandstone
Quaternary deposits	Small to large yields. Water is very hard, moderate in dissolved solids, contains iron, and has a pH of less than 7.0.	Small to large yields. Water is hard, moderate in dissolved solids, contains iron, and has a pH of less than 7.0.	Small to large yields. Water is hard, moderate in dissolved solids, contains iron, and has a pH of less than 7.0.	Small to large yields. Water is hard, moderate in dissolved solids, contains some iron, and has a pH of less than 7.0.	Quaternary deposits

Low flow of stream:
- Very well sustained, low-flow index is more than 0.08 cfs per sq mi.
- Well sustained, low-flow index is from 0.01 to 0.08 cfs per sq mi.
- Poorly sustained, low-flow index is less than 0.01 cfs per sq mi.

Ground-water yields:
- Large yield, more than 1 mgd. (1 mgd is about equal to 694 gpm for 24 hr).
- Moderate, 0.1 to 1 mgd.
- Small, less than 0.1 mgd.

Dissolved solids:
- Low dissolved solids, less than 100 ppm.
- Moderate, 100–500 ppm.
- High, 501–1,000 ppm.
- Saline water, more than 1,000 ppm.
- Fresh water, less than 1,000 ppm.

Hardness of water (as $CaCO_3$):
- Soft, 0–60 ppm.
- Moderately hard, 61–120 ppm.
- Hard, 121–180 ppm.
- Very hard, more than 180 ppm.

Iron:
- Some iron, median value of iron in chemical quality tables, 0.1–0.3 ppm.
- Iron, median value more than 0.3 ppm.

U.S. Public Health Service recommended limits for drinking-water standards:
- Dissolved solids should not exceed 500 ppm, except where water of this quality is not available.
- Iron should not exceed 0.3 ppm.
- Fluoride, maximum ranges downward from 1.7 ppm for an average maximum daily temperature of 50° F to 0.8 ppm for an average maximum daily temperature of 90.5° F.
- Nitrate should not exceed 45 ppm.

377-493 O - 70 (In pocket)